

REMARKS

Claims 1 through 6, 8 through 16, and 18 through 21 are now pending in this application. Claims 18 through 20 stand allowed. Claims 10 through 16 and 21 stand withdrawn. Claims 1 through 9 stand rejected. In response to the non-final Office Action dated June 17, 2005, claim 7 has been cancelled, and claims 1, 8 and 19 have been amended. Care has been taken to avoid the introduction of new matter. Favorable reconsideration of the application is respectfully solicited.

Objection has been made to the drawings as set forth at paragraph 2 of the Office Action. In response new drawing sheets are submitted herewith. These sheets replace the handwritten descriptions of original figures 1B, 1C, 2A, 2B, 3B, 3C, 4, 5, 6A and 6B with formal printed letters or numbers. No new matter has been added. Entry of the replacement pages and withdrawal of the objection are respectfully solicited.

Objection has been made to claim 7 for duplicating claim 6. In response, claim 7 has been cancelled and the dependency of claim 8 has been changed from claim 7 to claim 6. The objection thus is believed to have been overcome.

Claims 1 through 4 have been rejected under 35 U. S. C. § 103(a) as being unpatentable over DE 3705692 (Bosch) in view of U.S. patent 4,013,334 (Behnke). The rejection is set forth at pages 3-5 of the Office Action. Independent claim 1 has been amended in the first main paragraph to clarify antecedent basis relationship for the term “portion” and the downwardly projecting arrangement of the first and second engagement members. The claim has also been amended to clarify that both the first and second portions are secured to the coil-on-plug housing. It is submitted that claims 1 through 4 are patentably distinguishable. Favorable reconsideration is respectfully solicited.

Legal precedent is well developed with respect to 35 U.S.C. §103. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 USPQ 459, 465 (1966), obviousness under 35

U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art. The PTO is thus charged with the initial burden of identifying a source in the applied prior art for: (1) claim features; and (2) the realistic requisite motivation for combining applied references to arrive at the claimed invention with a reasonable expectation of successfully achieving a specific benefit. *Smith Industries Medical Systems v. Vital Signs*, 183 F.3d 1347, 51 USPQ2d 1415 (Fed. Cir. 1999). This burden is not met if there is no showing that the combination of references would actually meet all the limitations of the claims under consideration.

Obviousness under 35 U. S. C. § 103 requires a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

What may or may not be known in general does not establish the requisite realistic motivation to support the ultimate legal conclusion of obviousness under 35 U.S.C. § 103. *In re Deuel*, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995). Motivation is not an abstract concept, but must stem from the applied prior art as a whole and have realistically impelled one having ordinary skill in the art, at the time the invention was made, to modify a reference in a specific manner to arrive at a specifically claimed invention with a reasonable expectation of achieving a specific benefit. *In re Newell*, 891 F.2d 899, 13 USPQ2d 1248 (Fed. Cir. 1989).

It is submitted that the prior art does not meet these criteria for the claims under rejection. The question is not what one having ordinary skill in the art could or could not do,

but: *why* would one having ordinary skill in the art have been realistically impelled to deviate from the express teachings of the prior art to arrive at the claimed invention? *Gentry Gallery v. Berkline*, 134 F.3d 1473, 45 USPQ2d 1498 (Fed. Cir. 1998); *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). In the absence of such a prior art suggestion for modification, the basis of the rejection is no more than inappropriate hindsight reconstruction using appellant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Reconsideration of the rejection in light of these established tenets is respectfully solicited. Independent claim 1 recites, in part, the following:

wherein the first portion may be translated relative to the second portion against a bias of the biasing element to an expanded state for securement of both the first and second portions to a coil-on plug housing.

The primary reference, Bosch, is a German language document. An English language translation of this document is submitted herewith. Bosch differs from the claimed invention in several respects.

In Bosch, the ignition coils 11 are mounted in the ignition distributor housing 10. Conductors 12 run between the distributor housing and engine cylinders in conventional fashion. Bosch does not disclose a coil-on-plug housing arrangement as required by independent claim 1.

In Bosch, a cable that surrounds the distributor housing capacitively picks up the ignition voltage of the ignition coils. A remote end of the cable (connector 14) is to be coupled to engine test equipment 15. In the embodiment of FIG. 2, the cable 13 is looped several times around the distributor housing and held in place by a hook 16 at its end. Hook 16 is suspended in the turns of the cable 13 so that the cable is tightly secured around the distributor housing. In the embodiment of FIG. 3, one end of the cable 20 is formed with a Velcro type lock element. A mating Velcro type element 22 is formed intermediate the ends

of the cable. Spring 23 takes up slack in the cable when elements 21 and 22 are in mating relationship so that the cable rests snugly against the distributor housing.

It is submitted that Bosch does not disclose requirements of independent claim 1 that are recited as follows:

a first portion of the capacitive sensor having at least one first engagement member projecting outwardly therefrom and a second portion of the capacitive sensor engageable with the first portion and configured to slide relative to the first portion, the second portion having at least one second engagement member projecting outwardly therefrom, at least one of the first portion and the second portion comprising a capacitive element

Neither the FIG. 2 nor the FIG. 3 embodiment of Bosch discloses two engagement members of the capacitor sensor that extend outwardly, nor that are engageable with each other. There are no two discernible portions of the sensor of Bosch that slide relative to each other. The Office Action has read the claimed second portion on the remote end 14 of the Bosch connector; however, such reading does not meet the requirement at the last paragraph of claim 1 that both the first and second portions be secured to a coil-on plug housing.

Behnke has been relied upon for disclosing a diagnostic device for an ignition coil having a planar base that defines a groove within which a protruding member can slide. It is submitted that a person of ordinary skill in the art would have found no motivation, from a consideration of both applied references, to modify the Bosch arrangement to arrive at the presently claimed invention.

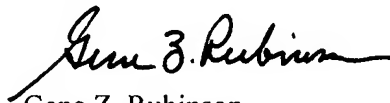
Claims 5 through 9 have been rejected under 35 U. S. C. § 103(a) as being unpatentable over Bosch in view of Behnke and further in view of U.S. patent 5,419,300 (Maruyama). Maruyama has been relied upon for disclosing a guide rod disposed along a longitudinal axis of a spring, rigidly connected to one side of the spring connection and slidably connected to the other side of the spring connection.

This rejection is respectfully traversed. Muryama discloses a capacitor sensor 15, comprising plates 13 and 14, which are within the enclosed ignition coil housing 9. The housing is structurally coupled to spark plug 1. Compression spring 22, between members 21 and 12 within the housing, exerts a force on member 12 so that capacitor elements 13 and 14 are biased toward each other. It is submitted that a person of ordinary skill in the art, upon consideration of the Bosch, Behnke and Maruyama, would have found no motivation for inserting a guide rod along the axis of spring 23 Of Bosch. In addition, it is submitted that Maruyama would not have provided motivation to provide the elements of parent claim 1, described above, that are missing from the teachings of Bosch and Behnke.

In summary, it is submitted that all pending claims are patentably distinguishable from the prior art. Allowance of the application is respectfully solicited. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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NOTES re OS DE 37 05 692 A1

1. the "adapter plates ..." (sheetmetal...) cited in the state of the art section are not otherwise defined in disclosure.

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2. the "*looping* cable....(13)..." is claimed in claim 3 and also is basic to the invention; the German "*SPIRAL KABEL*" is absent from every available and pertinent technical dictionary; a few entries in Google appear to be for other applications.

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Literally it means "spiral cable" where "spiral" is frequently abused in German to mean "helical"; a more meaningful translation would be "coiled cable" -- something like a "coiled telephone cord"; they do NOT use the word "cord" however.

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While Fig. 2 vaguely shows something like a stretched coiled cord/cable, the cross-section of fig. 1 only shows what appears to be a single coax cable at each right and left wall of the distributor housing: it seems to me a coax cable is too stiff to be bent into the shape of a coiled telephone cord.

These difficulties led me to selecting the rendition "*looping* cable..."

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3. "capacitive pickup": the original expression is idiomatic but strongly conveys only "picking up" or "tapping"; such a rendition is supported by references.

Feel free to call me at 703 354 0491 for further discussion.

30 June 2005

Regards/Harry

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